## Appendix H - AAI December 8, 2006, Report

## Crandall Canyon Mine Ground Condition Review for Mining in the Main West North Barrier

226-20 GENWAL Crandall Canyon Mine Trip Report 12-1-2006.pdf klg 9-22-07



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December 8, 2006

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Mr. Laine Adair GENWAL Resources, Inc. 195 North 100 West P. O. Box 1420 Huntington, UT 84528

> Re: Crandall Canyon Mine Ground Condition Review for Mining in the Main West North Barrier

Dear Laine,

On December 1, 2006, Agapito Associates, Inc. (AAI), personnel, Michael Hardy, Gary Skaggs, and Bo Yu visited Crandall Canyon Mine to review the ground conditions of the room-and-pillar mining in the north barrier pillar along Main West. AAI personnel were escorted by Laine Adair.

Current plans in Main West include developing four entries in the north barrier west of the 1<sup>st</sup> Right Submains under cover ranging from approximately 1,300 ft to 2,200 ft. The mine plans were previously evaluated by AAI, and the proposed mine plan with 60-ft by 72-ft (ribto-rib) pillars was judged to be adequate for short-term recovery mining in the barriers.

At the time of our visit, four entries with 60-ft by 72-ft (rib-to-rib) pillars were developed in the Main West north barrier to Crosscut 123, where the depth of cover was almost 2,000 ft (See Figure 1). Entry widths were cut at 17 ft and were about 20 ft wide at pillar mid-height. Roof support included systematic bolting and rib-to-rib meshing. To the north and south of the mining area, 130-ft and 60-ft barriers were left, respectively, for the purpose of protection.

Good to excellent ground conditions were observed at all locations visited. Stable roof, floor, and ribs with only minor rib sloughage were observed in the recently mined areas in the

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Agapito Associates, Inc. (2006), "DRAFT—GEWNALL Crandall Canyon Mine Main West Barrier Mining Evaluation," prepared for Andalex Resources, Inc., July 20.

<sup>&</sup>lt;sup>2</sup> Agapito Associates, Inc. (2006), "(226-30) GENWAL Main West Retreat Analysis—Preliminary Results," E-mail from Leo Gilbride to Laine Adair, August 9.

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West Main barrier. Photo 1 shows only minor rib sloughing at Crosscut 123 in the entry immediately north of the West Mains. Photo 2 shows the second entry below longwall Panel 12 with minor sloughing at the rib between Crosscut 122 and Crosscut 121. The conditions of ribs along the north remnant barriers were good and consistent as shown in Photo 3. The rib was mildly yielded, but showed no evidence of blowouts, indicating that the 130-ft-wide remnant barrier pillar is wide enough to accommodate the load transfer from Panel 12 for short-term mining. The abutment load is expected to have alleviated since the time that Panel 12 was retreated in 1999 due to ground settlement and subsidence.

In summary, current ground conditions in Main West agree with our previous analysis. Roof, floor, and rib conditions were consistent with analytical predictions. There was no indication of problematic pillar yielding or roof problems that might indicate higher-than-predicted abutment loads. Conditions should continue to be carefully observed as mining progresses to the west under deeper cover.

We appreciate the opportunity to visit this area and directly observe ground conditions in the West Mains barrier. Please contact us if you have any questions.

Sincerely,

Michael Hardy Principal

mhardy@agapito.com

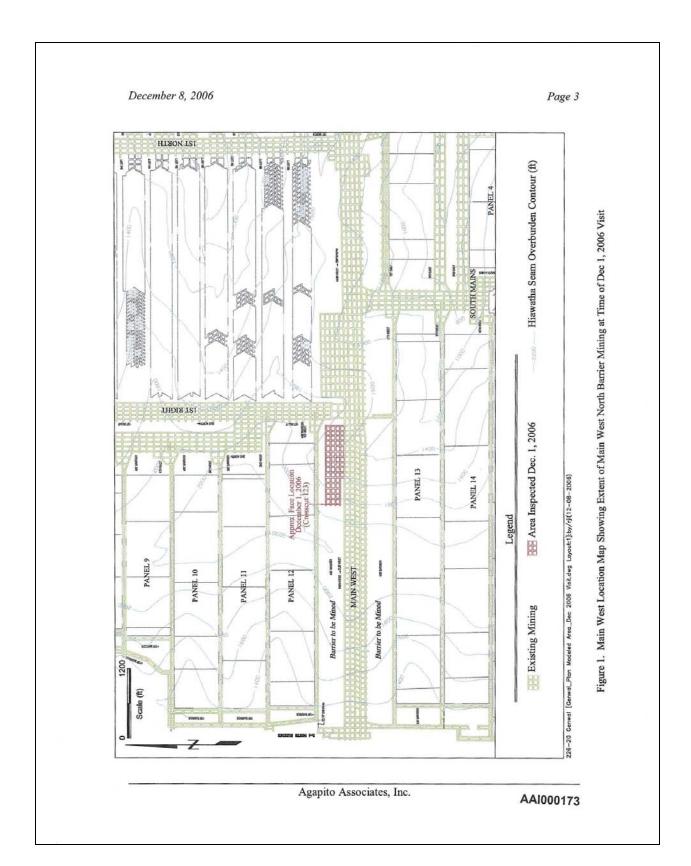
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Attachments(4): Figure 1 Photos 1-3

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Photo 1. Rib Sloughing Near Crosscut 123 in the Entry North to the South Remnant Barrier Pillar

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Photo 2. Minor Rib Sloughing at Crosscut 122 in the Second Entry from North Remnant Pillar

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Photo 3. North Remnant Barrier Pillar Rib Condition Between Crosscuts 120 and 119

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